

RADIOLOGICAL ROAD MAP TO TUBEROUS SCLEROSIS COMPLEX (TSC)

LEARNING OBJECTIVES

The objective of this article is to present imaging findings in tuberous sclerosis complex, which will eventually help in imaging based diagnosis.

METHODOLOGY

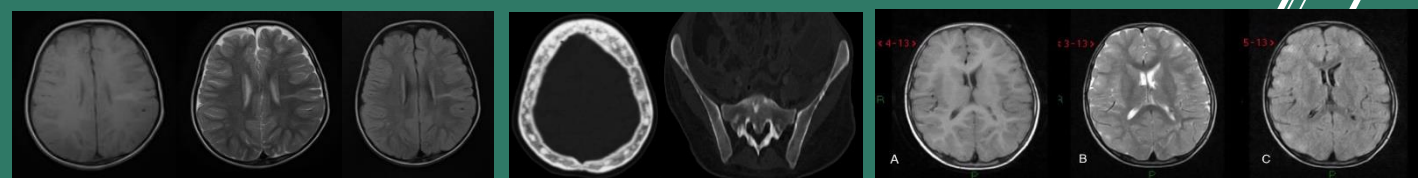
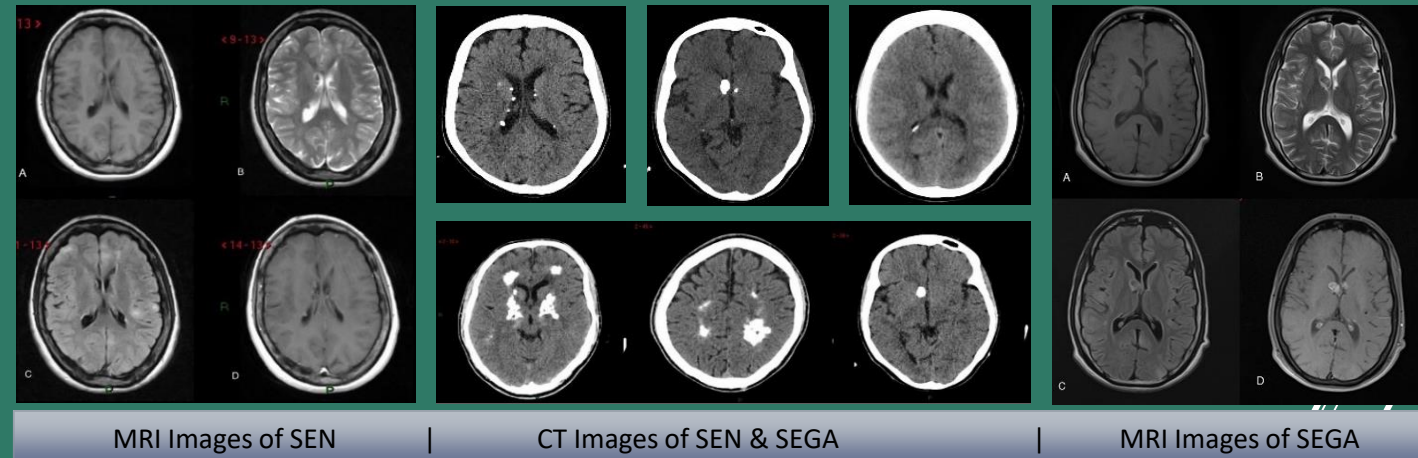
Total of 20 patients were selected from the radiology database retrospectively from 2010 to 2021. These patients were diagnosed with Tuberous Sclerosis by radiology department and their scans were performed and reviewed at CT and MRI machines of Shifa International Hospital. CT scan was performed on Toshiba 640 slices, Siemens 128 slices and Siemens 16 slices, and MRI was performed on Siemens 3 tesla, Toshiba-titan 1.5 tesla and Hitachi 0.4 tesla. The literature review was also done to identify multi-organ system involvement of this disease.

FINDINGS

TSC is a rare autosomal dominantly inherited genetic neurocutaneous disorder. It occurs due to inactivating mutation in TSC 1/TSC 2 gene which has vital role in regulation of cell growth and proliferation. Common presentation include cortical tubers, subependymal nodule, white matter abnormalities, renal abnormalities, cardiac rhabdomyoma, lymphangiomyomatosis, renal angiomyolipoma and skin lesions. TSC manifestations are seen after years. TSC lasts lifelong thus it requires regular monitoring of TSC patients to identify new symptoms. Most common cause of mortality in TSC is due to neurological manifestations, therefore neuroimaging is important in early diagnosis. Computed tomography and MRI are used as first line investigations in TSC. Thus, TSC is a multisystem disorder characterized by a broad and extensive spectrum of imaging features.

CONCLUSION

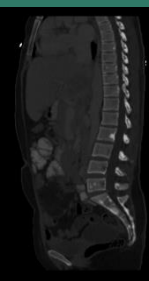
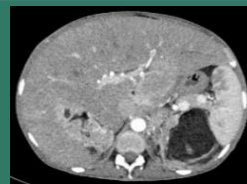
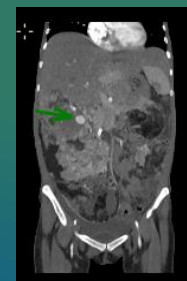
Timely identification of these radiological findings are essential in making accurate diagnosis and thus saving the patient from morbidity and mortality.



Radial Bands
(A:T1, B:T2 , C: Flair)

Sclerotic bony lesions

Cortical Tubers
(A:T1, B:T2 , C: Flair)



Pseudoaneurysm | LAM | Renal AML | Liver AML | Myocardial Fatty Foci | Bony lesion

CONFLICT OF INTEREST: All authors have no conflict of interest.